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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 8910
RESTON, VA 20195

EXAMINER

ROYAL, PAUL

ART UNIT PAPER NUMBER

3611

DATE MAILED: 05/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/698,469

Applicant(s)

CHANG, OWEN

Examiner

Paul Royal

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Gray et al. (2,203,868).

Gray et al. teaches a process for making a frame part, comprising:

placing a one-piece metallic tube blank (35) in a die (4,5);

hydraulically forming said tube blank by introducing a hydraulic pressure into said tube blank to deform and expand said tube blank so as to form at least one expanded wall part (38/39) projecting from said tube blank along a direction different from the direction of extension of said tube blank;

and machining said expanded wall part to form a connection tube, and wherein said expanded wall part is drilled during the step of machining so that said connection tube opens at least one end thereof. see page 4, column 1, line 75 – page 4, column 2, line 9.

Note, where applicant does not recite any bicycle specific limitations, it is understood the use of the claimed process for making a bicycle frame part is only intended use.

Further, it is understood that the part made in Gray et al. could be a bicycle frame part or any other item because the focus of the teaching in Gray et al. is the use of hydraulic pressure to form metals blanks into items which have branch fittings which is also consistent with the understanding that applicant's invention is also directed at the use of hydraulic pressure to form metals blanks into items which have branch fittings such as a bicycle frame.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al., as applied to claim 1, in view of Kent et al. (3,670,545).

Gray et al., as applied to claim 1 teaches a process for making a frame part having the claimed limitations except wherein at least one of the frame parts is made of an aluminum alloy.

Kent et al. teaches a bulge forming process wherein the tube blank is made of an aluminum alloy, see column 2, lines 21-26, to provide formable blank material.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the process for making a frame part of Gray et al. to include wherein

said tube blank is made of an aluminum alloy, since such a material is capable of plastic deformation, and as taught by Kent et al., to provide a blank material.

Note, Gray et al., as applied to claim 2, teaches the tube blank being placed in said die cavity and having opposite open ends aligned and communicated respectively with said die openings, said hydraulic pressure being introduced into said tube blank.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al., as applied to claim 1, and in further view of Takamiya et al. (US 5,253,890).

Gray et al., as applied to claim 1 teaches a process for making a frame part having the claimed limitations except specific frame parts wherein at least one of the frame parts is formed via the process.

Takamiya et al. teaches a bulge process for making a bicycle frame including:

a cross bar (1);

a down tube (2);

a seat tube (4);

a seat stay (7);

a chain stay (5);

a first connector (3), having connection tubes for connecting said cross bar (1) to said seat tube (4);

a second connector (3) three connection tubes (3a, 3b, 3c) and fixed to said seat tube (4) opposite to said first connector (1f) and connecting said seat tube (4) to said down tube (2); and

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a head tube (6) connected to said cross bar (1) and said down tube (2) opposite to said first (1f) and second (3) connectors, to provide an improved bicycle frame which can be readily manufactured by an automated process.

It would have been obvious to one of ordinary skill at the time of the invention to use the frame making process of Gray et al., as applied to claim 1, to produce the above specific frame parts, as taught by Takamiya et al., to provide an improved bicycle frame which can be readily manufactured by an automated process.

Note the first connector for connecting the cross bar to the seat tube is understood to be taught by Takamiya et al. in the teaching of second connector and/or the teaching of the head tube because those teachings disclose a connector/tube linked to other frame elements in a substantially similar manner.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al. and Takamiya et al. as applied to claim 3, and in further view of Kimura (US 4,305,269).

Gray et al. and Takamiya et al. as applied to claim 3, teaches a process for making a frame part having the claimed limitations except wherein said tube blank is substantially straight, said tube blank being deformed and expanded to form two of said expanded wall parts which project in two different directions from two axially aligned and spaced apart locations of said tube blank, each of said expanded wall parts being machined to form said connection tube.

Kimura '269 teaches a process for manufacturing a bicycle frame component wherein said tube blank (7) is substantially straight, said tube blank being deformed and expanded to form two of said expanded wall parts (11, 12) which project in two different directions from two axially aligned and spaced apart locations of said tube blank (7), each of said expanded wall parts being machined to form said connection tube and to manufacture a completed component, see column 6, line 48-51.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the process for making a frame part of Gray et al. and Takamiya et al. as applied to claim 3, to include wherein said tube blank is substantially straight, said tube blank being deformed and expanded to form two of said expanded wall parts which project in two different directions from two axially aligned and spaced apart locations of said tube blank, each of said expanded wall parts being machined to form said connection tube, as taught by Kimura, to manufacture a completed component.

5. Claim 5, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al. and Takamiya et al. as applied to claim 3, and in further view of Kimura (US 4,305,269).

Gray et al. Takamiya et al. as applied to claim 3, teaches a process for making a frame part having the claimed limitations except wherein said tube blank is bent to form a turn and two substantially parallel tube sections at two sides of said turn before being placed in said die, said tube blank being deformed and expanded at said turn to form said expanded wall part.

Kimura '269 teaches a process for manufacturing a bicycle frame component wherein said tube blank (4) is bent to form a turn and two tube sections (2b and 2c) at two sides of a turn (3a) before being placed in said die, said tube blank being deformed and expanded at said turn to form said expanded wall part (14), see column 4, lines 9-26, to provide an improved method of manufacturing a bicycle part.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the process for making a frame part of Gray et al. Takamiya et al. as applied to claim 3, to include wherein said tube blank is bent to form a turn and two substantially parallel tube sections at two sides of said turn before being placed in said die, said tube blank being deformed and expanded at said turn to form said expanded wall part, as taught by Kimura '269, to provide an improved method of manufacturing a bicycle part.

Note, where Kimura '269 teaches using it's bulge forming process to manufacture, the process is understood to be useable for forming other bicycle components such as the seat stay and the chain stay because they involve identical steps wherein said tube blank is bent to form a turn and two substantially parallel tube sections at two sides of said turn.

Allowable Subject Matter

6. Claims 6-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not show a bicycle frame as recited wherein the frame parts comprise a one-piece unitary unit composed of a cross bar, down tube, and a head tube formed via the recited hydraulic forming process including the steps of bending the tube blank to form sections at an acute angle.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Takamiya et al. '756 teaches a blank tube for a bicycle main frame. Akamatsu teaches a method of manufacturing pipes. Pietrobon teaches a process for manufacturing hollow metal elements. Schafer teaches shaping a hollow body.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Royal whose telephone number is 703-308-8570. The examiner can normally be reached on 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley D. Morris can be reached on 703-308-0629. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



P. Royal
May 17, 2004

Paul Royal
Examiner
Art Unit 3611



LESLEY D. MORRIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600